

# SEQUENCE LISTING

<110> Desgroseillers, Luc  
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Luo, Ming J.  
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Cohen, Eric A. J.

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<150> US 09/316,048

<151> 1999-05-21

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Lys Asn Glu Phe Val Ser Leu Ile Asn Cys Ser Ser Gln Pro Pro Leu  
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Ile Ser His Gly Ile Gly Lys Asp Val Glu Ser Cys His Asp Met Ala  
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Gly Lys Lys Pro Met Tyr Lys Pro Val Asp Pro Tyr Ser Arg Met Gln	
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Gly Thr Asn Lys Lys Val Ala Lys Arg Asn Ala Ala Glu Asn Met Leu	
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Leu Lys Ser Glu Glu Lys Thr Pro Ile Lys Lys Pro Gly Asp Gly Arg	
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ccc gtg aaa cac gat gcc cct gcc cgt gcg ctg agg act ctg cag agt 545
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Arg Ala Val Leu Glu Gln Leu Arg Arg Leu Pro Pro Leu Pro Ala Val	155	160	165	170
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Glu Arg Val Lys Pro Arg Ile Lys Lys Lys Ser Gln Pro Thr Cys Lys	175	180	185	
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Thr Glu Arg Gly Leu Pro Arg Arg Arg Glu Phe Val Met Gln Val Lys	220	225	230	
gtt ggg cat cac act gca gaa gga gtg ggt acc aat aag aag gtg gcc				1073
Val Gly His His Thr Ala Glu Gly Val Gly Thr Asn Lys Lys Val Ala	235	240	245	250
aag cgt aat gct gct gag aac atg ctg gag atc ctg ggg ttc aaa gtt				1121
Lys Arg Asn Ala Ala Glu Asn Met Leu Glu Ile Leu Gly Phe Lys Val	255	260	265	
ccc cag gcg cag cct gcc aag cca gca ctc aaa tca gaa gag aag act				1169
Pro Gln Ala Gln Pro Ala Lys Pro Ala Leu Lys Ser Glu Glu Lys Thr	270	275	280	
cca gta aag aaa cca gga gac gga agg aaa gta acg ttt ttt gaa cct				1217
Pro Val Lys Lys Pro Gly Asp Gly Arg Lys Val Thr Phe Phe Glu Pro	285	290	295	
agc cct ggg gat gaa aat gga act agt aac aag gac gag gag ttc agg				1265
Ser Pro Gly Asp Glu Asn Gly Thr Ser Asn Lys Asp Glu Glu Phe Arg	300	305	310	
atg cct tat ctt agc cat cag cag ctg cca gct gga att ctc ccc atg				1313
Met Pro Tyr Leu Ser His Gln Gln Leu Pro Ala Gly Ile Leu Pro Met	315	320	325	330

gtg ccg gaa gtt gcc cag gct gtc ggg gtt agt caa gga cac cac acc	1361
Val Pro Glu Val Ala Gln Ala Val Gly Val Ser Gln Gly His His Thr	
335 340 345	
aaa gat ttc acc agg gca gct cca aat cct gcc aag gca acg gta act	1409
Lys Asp Phe Thr Arg Ala Ala Pro Asn Pro Ala Lys Ala Thr Val Thr	
350 355 360	
gcc atg ata gcc cga gag ttg ttg tac ggg ggc acc tcg ccc aca gcc	1457
Ala Met Ile Ala Arg Glu Leu Leu Tyr Gly Gly Thr Ser Pro Thr Ala	
365 370 375	
gag acc att tta aag agt aac atc tct tca ggc cac gta ccc cat gga	1505
Glu Thr Ile Leu Lys Ser Asn Ile Ser Ser Gly His Val Pro His Gly	
380 385 390	
cct cgc act aga ccc tct gag caa ctg tac tac ctt tcc aga gcc cag	1553
Pro Arg Thr Arg Pro Ser Glu Gln Leu Tyr Tyr Leu Ser Arg Ala Gln	
395 400 405 410	
gga ttc cag gtt gaa tac aaa gat ttt ccc aag aac aac aag aac gag	1601
Gly Phe Gln Val Glu Tyr Lys Asp Phe Pro Lys Asn Asn Lys Asn Glu	
415 420 425	
tgt gta tct ctc atc aac tgc tcc tca cag ccg cct ctc gtc agt cat	1649
Cys Val Ser Leu Ile Asn Cys Ser Ser Gln Pro Pro Leu Val Ser His	
430 435 440	
ggc atc ggc aag gat gtg gag tcc tgt cat gat atg gct gca ctg aac	1697
Gly Ile Gly Lys Asp Val Glu Ser Cys His Asp Met Ala Ala Leu Asn	
445 450 455	
att tta aag ctg ctg tct gag ttg gac caa cag agc aca gag atg cca	1745
Ile Leu Lys Leu Leu Ser Glu Leu Asp Gln Gln Ser Thr Glu Met Pro	
460 465 470	
aga aca gga aat gga cca gtt tca gcg tgc ggg agg tgc tgaacctttt	1794
Arg Thr Gly Asn Gly Pro Val Ser Ala Cys Gly Arg Cys	
475 480 485	
ctggccacaa accattataa aacccaacat atatactgaa aatactgaga actgctttga	1854
aaatttgga tatctgataa ctccagtggg ccaagacatg gtggataaaa atgtggcaaa	1914
gacgacaaga aacttcaggt ggtagccctg gttgtgctgg cggctagtga tgatgctgtg	1974
ctctgccatc catccagaca gaaaccagcc ccaacgcctc cagttctgtt tttgcatcgt	2034
gacaaagaga gcacagccaa ttctcatgct ggcttcttca gatactttga aaaacccgga	2094
cagccacacc agagaggcct tatagcggcc ccggagctaa acggaccaga gaaaaggcca	2154
gtgcttccta ctgcacatga ctgactcagc tccgccacac gtagcaccac tgtaaccact	2214
gctttctctt cagtttcatt ttttctctt gattgataca acactataat tttcatttca	2274
gttccttagt cgtgtctact tacctagcag tttagaaact gtcagtcatg taactggcaa	2334
ggatcacagc ccggttgggt ggcattctgt gcctctggct tggctgaaca gttctggaat	2394

taccaccaga atccttgact cccctgcccct tgtataaatt ggacagctta ggacttttaa 2454  
 acttttagatc aaaagatatg gtccttttta actttatttt taaggagcag acttttaaact 2514  
 gagccctgac ctttaccat tataacagaa tttgtcaaaa ggagtgtttc ttgaggaggt 2574  
 agcttttttt taccacacta caggacatta cctgtaggcc cagaagacta caggctggtg 2634  
 tccctagagg gcccaatata gtcaattcca acctctaagt cggggaaagg tgacagggtt 2694  
 cctggtgctg gtgtgcacag gggcaggcag gtcagctggc ctggggaaga gcattgtggc 2754  
 tcctagtga gccctgcttc cactcttggg ttagctggaa ccttcccact catggaatat 2814  
 aagtaaactc actttctttg tcaccaataa atggtaatat taa 2857

<210> 8  
 <211> 487  
 <212> PRT  
 <213> Mus musculus

<400> 8

Met Tyr Lys Pro Val Asp Pro His Ser Arg Met Gln Ser Thr Tyr Ser  
 1 5 10 15

Tyr Gly Met Arg Gly Gly Ala Tyr Pro Pro Arg Tyr Phe Tyr Pro Phe  
 20 25 30

Pro Val Pro Pro Leu Leu Tyr Gln Val Glu Leu Ser Val Gly Gly Gln  
 35 40 45

Gln Phe Asn Gly Lys Gly Lys Met Arg Pro Pro Val Lys His Asp Ala  
 50 55 60

Pro Ala Arg Ala Leu Arg Thr Leu Gln Ser Glu Pro Leu Pro Glu Arg  
 65 70 75 80

Leu Glu Val Asn Gly Arg Glu Ala Glu Glu Glu Asn Leu Asn Lys Ser  
 85 90 95

Glu Ile Ser Gln Val Phe Glu Ile Ala Leu Lys Arg Asn Leu Pro Val  
 100 105 110

Asn Phe Glu Val Ala Arg Glu Ser Gly Pro Pro His Met Lys Asn Phe  
 115 120 125

Val Thr Arg Val Ser Val Gly Glu Phe Val Gly Glu Gly Glu Gly Lys  
 130 135 140

Ser Lys Lys Ile Ser Lys Lys Asn Ala Ala Arg Ala Val Leu Glu Gln

145		150		155		160
Leu Arg Arg Leu	Pro Pro Leu Pro	Ala Val Glu Arg Val	Lys Pro Arg			
	165	170	175			
Ile Lys Lys Lys	Ser Gln Pro Thr	Cys Lys Thr Ala Pro	Asp Tyr Gly			
	180	185	190			
Gln Gly Met Asn	Pro Ile Ser Arg	Leu Ala Gln Ile	Gln Gln Ala Lys			
	195	200	205			
Lys Glu Lys Glu	Pro Glu Tyr Met	Leu Leu Thr Glu	Arg Gly Leu Pro			
	210	215	220			
Arg Arg Arg Glu	Phe Val Met Gln	Val Lys Val Gly	His His Thr Ala			
	225	230	235			240
Glu Gly Val Gly	Thr Asn Lys Lys	Val Ala Lys Arg	Asn Ala Ala Glu			
	245	250	255			
Asn Met Leu Glu	Ile Leu Gly Phe	Lys Val Pro Gln	Ala Gln Pro Ala			
	260	265	270			
Lys Pro Ala Leu	Lys Ser Glu Glu	Lys Thr Pro Val	Lys Lys Pro Gly			
	275	280	285			
Asp Gly Arg Lys	Val Thr Phe Phe	Glu Pro Ser Pro	Gly Asp Glu Asn			
	290	295	300			
Gly Thr Ser Asn	Lys Asp Glu Glu	Phe Arg Met Pro	Tyr Leu Ser His			
	305	310	315			320
Gln Gln Leu Pro	Ala Gly Ile Leu	Pro Met Val Pro	Glu Val Ala Gln			
	325	330	335			
Ala Val Gly Val	Ser Gln Gly His	His Thr Lys Asp	Phe Thr Arg Ala			
	340	345	350			
Ala Pro Asn Pro	Ala Lys Ala Thr	Val Thr Ala Met	Ile Ala Arg Glu			
	355	360	365			
Leu Leu Tyr Gly	Gly Thr Ser Pro	Thr Ala Glu Thr	Ile Leu Lys Ser			
	370	375	380			
Asn Ile Ser Ser	Gly His Val Pro	His Gly Pro Arg	Thr Arg Pro Ser			
	385	390	395			400

Glu Gln Leu Tyr Tyr Leu Ser Arg Ala Gln Gly Phe Gln Val Glu Tyr  
405 410 415

Lys Asp Phe Pro Lys Asn Asn Lys Asn Glu Cys Val Ser Leu Ile Asn  
420 425 430

Cys Ser Ser Gln Pro Pro Leu Val Ser His Gly Ile Gly Lys Asp Val  
435 440 445

Glu Ser Cys His Asp Met Ala Ala Leu Asn Ile Leu Lys Leu Leu Ser  
450 455 460

Glu Leu Asp Gln Gln Ser Thr Glu Met Pro Arg Thr Gly Asn Gly Pro  
465 470 475 480

Val Ser Ala Cys Gly Arg Cys  
485

<210> 9

<211> 1026

<212> PRT

<213> Drosophila melanogaster

<400> 9

Met Gln His Asn Val His Ala Ala Arg Pro Ala Pro His Ile Arg Ala  
1 5 10 15

Ala His His His Ser His Ser His Ala His Met His Leu His Pro Gly  
20 25 30

Met Glu Gln His Leu Gly Pro Ser Leu Gln Gln Gln Gln Gln Pro Pro  
35 40 45

Pro Pro Pro Gln Gln Pro Pro His Arg Asp Leu His Ala Arg Leu Asn  
50 55 60

His His His Leu His Ala Gln Gln Gln Gln Gln Gln Gln Thr Ser Ser  
65 70 75 80

Asn Gln Ala Ala Ala Val Ala Ala Ala Gly Ala Ala Tyr His His Gly  
85 90 95

Asn Ile Asn Ser Asn Ser Gly Ser Asn Ile Ser Ser Asn Ser Asn Gln  
100 105 110



Met Gln Lys Ile Arg Gln Gln His Gln His Leu Ser Ser Ser Asn Gly  
115 120 125

Leu Leu Gly Asn Gln Pro Pro Gly Pro Pro Pro Gln Ala Phe Asn Pro  
130 135 140

Leu Ala Gly Asn Pro Ala Ala Leu Ala Tyr Asn Gln Leu Pro Pro His  
145 150 155 160

Pro Pro His His Met Ala Ala His Leu Gly Ser Tyr Ala Ala Pro Pro  
165 170 175

Pro His Tyr Tyr Met Ser Gln Ala Lys Pro Ala Lys Tyr Asn His Tyr  
180 185 190

Gly Ser Asn Ala Asn Ser Asn Ser Gly Ser Asn Asn Ser Asn Ser Asn  
195 200 205

Tyr Ala Pro Lys Ala Ile Leu Gln Asn Thr Tyr Arg Asn Gln Lys Val  
210 215 220

Val Val Pro Pro Val Val Gln Glu Val Thr Pro Val Pro Glu Pro Pro  
225 230 235 240

Val Thr Thr Asn Asn Ala Thr Thr Asn Ser Thr Ser Asn Ser Thr Val  
245 250 255

Ile Ala Ser Glu Pro Val Thr Gln Glu Asp Thr Ser Gln Lys Pro Glu  
260 265 270

Thr Arg Gln Glu Pro Ala Ser Ala Asp Asp His Val Ser Thr Gly Asn  
275 280 285

Ile Asp Ala Thr Gly Ala Leu Ser Asn Glu Asp Thr Ser Ser Ser Gly  
290 295 300

Arg Gly Gly Lys Asp Lys Thr Pro Met Cys Leu Val Asn Glu Leu Ala  
305 310 315 320

Arg Tyr Asn Lys Ile Thr His Gln Tyr Arg Leu Thr Glu Glu Arg Gly  
325 330 335

Pro Ala His Cys Lys Thr Phe Thr Val Thr Leu Met Leu Gly Asp Glu  
340 345 350

Glu Tyr Ser Ala Asp Gly Phe Lys Ile Lys Lys Ala Gln His Leu Ala

355

360

365

Ala Ser Lys Ala Ile Glu Glu Thr Met Tyr Lys His Pro Pro Pro Lys  
 370 375 380

Ile Arg Arg Ser Glu Glu Gly Gly Pro Met Arg Thr His Ile Thr Pro  
 385 390 395 400

Thr Val Glu Leu Asn Ala Leu Ala Met Lys Leu Gly Gln Arg Thr Phe  
 405 410 415

Tyr Leu Leu Asp Pro Thr Gln Ile Pro Pro Thr Asp Ser Ile Val Pro  
 420 425 430

Pro Glu Phe Ala Gly Gly His Leu Leu Thr Ala Pro Gly Pro Gly Met  
 435 440 445

Pro Gln Pro Pro Pro Pro Pro Ala Tyr Ala Leu Arg Gln Arg Leu Gly  
 450 455 460

Asn Gly Phe Val Pro Ile Pro Ser Gln Pro Met His Pro His Phe Phe  
 465 470 475 480

His Gly Pro Gly Gln Arg Pro Phe Pro Pro Lys Phe Pro Ser Arg Phe  
 485 490 495

Ala Leu Pro Pro Pro Leu Gly Ala His Val His His Gly Pro Asn Gly  
 500 505 510

Pro Phe Pro Ser Val Pro Thr Pro Pro Ser Lys Ile Thr Leu Phe Val  
 515 520 525

Gly Lys Gln Lys Phe Val Gly Ile Gly Arg Thr Leu Gln Gln Ala Lys  
 530 535 540

His Asp Ala Ala Ala Arg Ala Leu Gln Val Leu Lys Thr Gln Ala Ile  
 545 550 555 560

Ser Ala Ser Glu Glu Ala Leu Glu Asp Ser Met Asp Glu Gly Asp Lys  
 565 570 575

Lys Ser Pro Ile Ser Gln Val His Glu Ile Gly Ile Lys Arg Asn Met  
 580 585 590

Thr Val His Phe Lys Val Leu Arg Glu Glu Gly Pro Ala His Met Lys  
 595 600 605

Asn Phe Ile Thr Ala Cys Ile Val Gly Ser Ile Val Thr Glu Gly Glu  
610 615 620

Gly Asn Gly Lys Lys Val Ser Lys Lys Arg Ala Ala Glu Lys Met Leu  
625 630 635 640

Val Glu Leu Gln Lys Leu Pro Pro Leu Thr Pro Thr Lys Gln Thr Pro  
645 650 655

Leu Lys Arg Ile Lys Val Lys Thr Pro Gly Lys Ser Gly Ala Ala Ala  
660 665 670

Arg Glu Gly Ser Val Val Ser Gly Thr Asp Gly Thr Met Gln Thr Gly  
675 680 685

Lys Pro Glu Arg Arg Lys Arg Leu Asn Pro Pro Lys Asp Lys Leu Ile  
690 695 700

Asp Met Asp Asp Ala Asp Asn Pro Ile Thr Lys Leu Ile Gln Leu Gln  
705 710 715 720

Gln Thr Arg Lys Glu Lys Glu Pro Ile Phe Glu Leu Ile Ala Lys Asn  
725 730 735

Gly Asn Glu Thr Ala Arg Arg Arg Glu Phe Val Met Glu Val Ser Ala  
740 745 750

Ser Gly Ser Thr Ala Arg Gly Thr Gly Asn Ser Lys Lys Leu Ala Lys  
755 760 765

Arg Asn Ala Ala Gln Ala Leu Phe Glu Leu Leu Glu Ala Val Gln Val  
770 775 780

Thr Pro Thr Asn Glu Thr Gln Ser Ser Glu Glu Cys Cys Thr Ser Ala  
785 790 795 800

Thr Met Ser Ala Val Thr Ala Pro Ala Val Glu Ala Thr Ala Glu Gly  
805 810 815

Lys Val Pro Met Val Ala Thr Pro Val Gly Pro Met Pro Gly Ile Leu  
820 825 830

Ile Leu Arg Gln Asn Lys Lys Pro Ala Lys Lys Arg Asp Gln Ile Val  
835 840 845

Ile Val Lys Ser Asn Val Glu Ser Lys Glu Glu Glu Ala Asn Lys Glu  
850 855 860

Val Ala Val Ala Ala Glu Glu Asn Ser Asn Asn Ser Ala Asn Ser Gly  
865 870 875 880

Asp Ser Ser Asn Ser Ser Ser Gly Asp Ser Gln Ala Thr Glu Ala Ala  
885 890 895

Ser Glu Ser Ala Leu Asn Thr Ser Thr Gly Ser Asn Thr Ser Gly Val  
900 905 910

Ser Ser Asn Ser Ser Asn Val Gly Ala Asn Thr Asp Gly Asn Asn His  
915 920 925

Ala Glu Ser Lys Asn Asn Thr Glu Ser Ser Ser Asn Ser Thr Ser Asn  
930 935 940

Thr Gln Ser Ala Gly Val His Met Lys Glu Gln Leu Leu Tyr Leu Ser  
945 950 955 960

Lys Leu Leu Asp Phe Glu Val Asn Phe Ser Asp Tyr Pro Lys Gly Asn  
965 970 975

His Asn Glu Phe Leu Thr Ile Val Thr Leu Ser Thr His Pro Pro Gln  
980 985 990

Ile Cys His Gly Val Gly Lys Ser Ser Glu Glu Ser Gln Asn Asp Ala  
995 1000 1005

Ala Ser Asn Ala Leu Lys Ile Leu Ser Lys Leu Gly Leu Asn Asn  
1010 1015 1020

Ala Met Lys  
1025

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<212> PRT  
<213> Caenorhabditis elegans

<400> 10

Met Gln Ala Val Phe Glu Thr Thr Leu Thr Gln Lys Met Asp Gly Val  
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Met Ile Val Gln Glu Thr Thr Thr Asp Leu Ala Asp Thr Leu Glu Asn

20

25

30

Ala Ser Ile Ser Ala Glu Lys Ser Glu Gln Lys Pro Glu Arg Leu His  
35 40 45

Pro Gln His Trp Cys Gly Gln His Lys Phe Glu Ala Asp Ser Pro Thr  
50 55 60

Asn Phe Tyr Asp Tyr Thr Asn Ala Lys Glu Lys Glu Lys Ser Ala Met  
65 70 75 80

Cys Arg Val Ala Glu Ile Ala Arg Phe Asn Lys Leu Arg His Val Tyr  
85 90 95

Asn Leu Gln Asp Glu Ser Gly Pro Ala His Lys Lys Leu Phe Thr Val  
100 105 110

Lys Leu Val Leu Thr Glu Ala Glu Thr Phe Glu Gly Ser Gly Thr Ser  
115 120 125

Ile Lys Arg Ala Gln Gln Ala Ser Ala Glu Ala Ala Leu Lys Gly Thr  
130 135 140

Lys Leu Pro Leu Pro Thr Glu Lys Pro Thr Lys Lys Arg Ile Asn Asp  
145 150 155 160

Thr Thr Lys Pro His Arg Val Leu Gln Asn Val Cys Arg Thr Leu Gln  
165 170 175

Tyr Gln Met Pro Asn Tyr Ile Ser Cys Asn Pro Pro Val Tyr Pro Asp  
180 185 190

Pro Gly Cys Pro Leu Pro Glu His Ile Leu Leu Pro Leu Glu Ser Met  
195 200 205

Ala Leu Tyr Ala Pro Pro Phe Pro Thr Leu Pro Ile Asp Pro Ala Arg  
210 215 220

Pro Gln Gly Pro Lys Leu Gln Ala Val Ile Val Asn Ile Asn Gly Lys  
225 230 235 240

Ser Ile Ala Thr Gly Ile Gly Glu Thr Tyr Pro Leu Ala Lys Gln Asp  
245 250 255

Ala Ala Ala Lys Ala Leu Ala Val Leu Ser Pro Leu Leu Arg Glu His  
260 265 270

Gln Asn Gly Ser Asp Asn Gly Phe Gly Lys Glu Asn Ile Pro Val His  
275 280 285

Lys Gln Lys Ser Val Ile Ser Asp Ile His Glu Lys Ala Tyr Gln Leu  
290 295 300

Lys Val Asn Val Val Phe Glu Val Leu Lys Glu Glu Gly Pro Pro His  
305 310 315 320

Asp Arg Gln Tyr Val Val Arg Cys Ala Phe Val Thr Ser Gly Asn Val  
325 330 335

Val Lys Ala Glu Ala Val Gly Lys Gly Lys Lys Lys Lys Ser Ala Gln  
340 345 350

Gln Glu Ala Cys Thr Gln Leu Leu Ala Thr Val Glu His Leu Thr Pro  
355 360 365

Glu Asn Asn Pro Val Ala Leu Ala Thr Asn Val Cys Lys Thr Gln Lys  
370 375 380

Lys Leu Ala Ala Met Asn Arg Glu Pro Lys Arg Lys Thr Ile Val Lys  
385 390 395 400

Asp Lys Lys Met Asp Pro Leu Tyr Gly His Gln Ile Asn Pro Val Ser  
405 410 415

Arg Leu Ile Gln Val Thr Gln Ala Lys Ser Lys Glu His Pro Thr Phe  
420 425 430

Glu Leu Val Ala Glu His Gly Val Ser Lys Tyr Lys Glu Phe Ile Ile  
435 440 445

Gln Val Lys Tyr Gly Asp Asp Val Gln Glu Gly Lys Gly Pro Asn Lys  
450 455 460

Arg Leu Ala Lys Arg Ala Ala Ala Glu Ala Met Leu Glu Ser Ile Gly  
465 470 475 480

Phe Val Lys Pro Leu Pro Pro Pro Gly Lys Ser Leu Leu Lys Lys Met  
485 490 495

Ile Asp Cys Asp Pro Ser Leu Pro Glu Ile Ser His Trp Thr Gly Pro  
500 505 510

Pro Pro Thr Ala Val Ser Val Ser Thr Ser Glu Pro Asp Thr Ser Glu  
515 520 525

Ala Ala Gln Leu Ser Pro Glu Gln Thr Asp Ile Ser Glu Lys Arg Glu  
530 535 540

Leu Ser Pro Asp Thr Glu Lys Arg Arg Val Thr Phe Asn Ser Gln Val  
545 550 555 560

His Ala Cys Pro Pro Pro Gly Asp Gln Asp Tyr Pro Asn Ser Ile Val  
565 570 575

Gln Ser Leu Lys Lys Asp Ala Ile Val Glu Gly Lys Ile Arg Arg Leu  
580 585 590

Lys Arg Ser Lys Glu Asn Arg Arg Ala Leu Thr Ala Glu Gln Ile Val  
595 600 605

Glu Leu Ser Glu Arg Ala Gln Ser Tyr Leu Gln Thr Lys Asn Thr Thr  
610 615 620

Ile Gln Ser Ser Gln Ser Ser Ser Ala His His His Leu Glu Gln Leu  
625 630 635 640

Ser Asp Phe Phe Lys Phe Ser Leu Gln Tyr Thr Ser Phe Pro Gln Val  
645 650 655

Gly Ile Asp Gln His Phe Thr Ile Val Ser Ile Gly Leu Glu Ala Pro  
660 665 670

Leu Val Gly His Gly Thr Gly Cys Ser Thr Thr Glu Ala Asp Glu Asn  
675 680 685

Ala Ala Leu Asp Ala Ile Ala Lys Leu Lys Glu Leu Ser Ala Ser Lys  
690 695 700

Thr  
705

<210> 11  
<211> 101  
<212> PRT  
<213> Homo sapiens

<400> 11

Gly Phe Lys Val Pro Gln Arg Gln Pro Thr Lys Pro Ala Leu Lys Ser

1                      5                      10                      15  
 Glu Glu Lys Thr Pro Ile Lys Lys Pro Gly Asp Gly Arg Lys Val Thr  
                     20                      25                      30  
 Phe Phe Asp Pro Gly Ser Gly Asp Glu Asn Gly Thr Ser Asn Lys Glu  
                     35                      40                      45  
 Asp Glu Phe Arg Leu Pro Tyr Leu Ser His Gln Gln Leu Pro Ala Gly  
                     50                      55                      60  
 Ile Leu Pro Met Val Pro Glu Val Ala Gln Ala Val Gly Val Ser Gln  
                     65                      70                      75                      80  
 Gly His His Thr Lys Asp Phe Thr Arg Ala Ala Pro Asn Pro Ala Lys  
                     85                      90                      95  
 Ala Thr Val Thr Ala  
                     100

<210> 12  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens  
 <400> 12

Lys Glu Lys Thr Lys Thr Lys Lys Pro Gly Thr Lys Thr Lys Ser Ser  
 1                      5                      10                      15  
 Ser Pro Val Lys Lys Ser Asp Gly Lys Ser Lys Pro Leu Ala Ala Ser  
                     20                      25                      30  
 Pro Lys Pro Ala Gly Leu Lys Glu Ser Ser Asp Lys Val Ser Arg Val  
                     35                      40                      45  
 Ala Ser Pro Lys Lys Lys Glu Ser Val Glu Lys Ala Ala Lys Pro Thr  
                     50                      55                      60  
 Thr Thr Pro Glu Val Lys Ala Ala Arg Gly Glu Glu Lys Asp Lys Glu  
                     65                      70                      75                      80  
 Thr Lys Asn Ala Ala Asn Ala Ser Ala Ser Lys Ser Ala Lys Thr Ala  
                     85                      90                      95  
 Thr Ala



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<220>  
<223> oligonucleotide

<400> 13  
agcttaatta gctgac

16

<210> 14  
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<212> DNA  
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<220>  
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<400> 14  
agctgtcagc taatta

16

<210> 15  
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<400> 15  
cctggatccg aaagtatagc ttctaccatt g

31

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36

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<220>  
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<400> 17  
ggatgaatcc tattagtaga cttgcac

27

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<220>  
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<400> 18  
gctctagatt caaagttccc caggcgcag

29

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<400> 19  
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29

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<220>  
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<400> 20  
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22

<210> 21  
<211> 36  
<212> DNA  
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<400> 21  
aaaaagcttg tgcaagtcta ctaataggat tcatcc

36

<210> 22  
<211> 18  
<212> DNA  
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<220>  
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<400> 22  
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18

<210> 23

<211> 36  
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 <223> oligonucleotide  
  
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 tacataagct tctagatggc cagaaaaggt tcagca 36

<210> 24  
 <211> 29  
 <212> DNA  
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 <220>  
 <223> oligonucleotide  
  
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<210> 25  
 <211> 44  
 <212> DNA  
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 <220>  
 <223> oligonucleotide  
  
 <400> 25  
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<210> 26  
 <211> 41  
 <212> DNA  
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 <220>  
 <223> oligonucleotide  
  
 <400> 26  
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<210> 27  
 <211> 40  
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 <220>  
 <223> oligonucleotide  
  
 <400> 27  
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<210> 28  
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<212> DNA  
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 <400> 28  
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 <223> oligonucleotide  
  
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 acaggatccc aaaattccct ggccttcc 28  
  
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 acaggatccc ttgtgacgag gggtcgtt 28  
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